

BAY AREA AIR POLLUTION SUMMARY — 2002

—See NOTES on back of this page

MONITORING STATIONS	OZONE				CARBON MONOXIDE			NITROGEN DIOXIDE			SULFUR DIOXIDE			PM ₁₀					PM _{2.5}								
	Max 1-Hr	Nat Days	Cal Days	3-Yr Avg	Max 8-Hr	Nat Days	3-Yr Avg	Max 1-Hr	Max 8-Hr	Nat/Cal Days	Max 1-Hr	Ann Avg	Nat/Cal Days	Max 24-Hr	Ann Avg	Nat/Cal Days	Ann Geo Mean	Ann Avg	Max 24-Hr	Nat Days	Cal Days	Max 24-Hr	Nat Days	3-Yr Avg	Ann Avg	3-Yr Avg	
North Counties	(pphm)				(pphm)			(ppm)			(pphm)			(ppb)			(µg/m³)					(µg/m³)			(µg/m³)		
Napa	12	0	1	0.0	8	0	6.3	4.2	2.4	0	5	1.3	0	-	-	-	22.6	25.4	67	0	4	-	-	-	-	-	
San Rafael	8	0	0	0.0	6	0	4.7	4.1	1.9	0	6	1.7	0	-	-	-	19.1	21.4	70	0	2	-	-	-	-	-	
Santa Rosa	8	0	0	0.0	6	0	5.2	3.7	2.1	0	5	1.3	0	-	-	-	17.8	19.7	60	0	2	51	0	40.2	10.5	10.5	
Vallejo	11	0	1	0.0	7	0	5.9	5.8	3.9	0	5	1.3	0	4	1.3	0	18.7	21.4	80	0	1	72	1	51.3	13.6	12.6	
Coast & Central Bay																											
Oakland	5	0	0	0.0	4	0	4.0	4.4	3.3	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Richmond	-	-	-	-	-	-	-	-	-	-	-	-	-	5	1.0	0	-	-	-	-	-	-	-	-	-	-	
San Francisco	5	0	0	0.0	5	0	4.4	3.5	2.6	0	8	1.9	0	6	1.9	0	21.0	24.7	74	0	2	70	4	48.0	13.1	11.9	
San Pablo*	7	0	0	0.0	5	0	4.5	3.7	1.8	0	5	*	0	5	*	0	*	*	67	0	3	-	-	-	-	-	
Eastern District																											
Bethel Island	11	0	5	0.3	10	3	7.9	1.7	1.3	0	4	1.0	0	9	2.5	0	20.8	23.8	58	0	3	-	-	-	-	-	
Concord	10	0	5	0.7	9	3	7.8	3.5	2.3	0	6	1.5	0	6	0.8	0	17.9	20.9	63	0	3	77	4	44.7	13.3	11.4	
Crockett	-	-	-	-	-	-	-	-	-	-	-	-	-	12	1.8	0	-	-	-	-	-	-	-	-	-	-	
Fairfield*	10	0	4	0.0	8	0	7.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Livermore	16	2	10	1.0	11	6	8.2	4.8	2.5	0	8	1.7	0	-	-	-	21.5	24.5	64	0	2	62	0	47.7	13.8	12.3	
Martinez	-	-	-	-	-	-	-	-	-	-	-	-	-	7	1.2	0	-	-	-	-	-	-	-	-	-	-	
Pittsburg	11	0	4	0.0	10	2	7.4	6.2	2.5	0	5	1.3	0	14	2.5	0	21.1	23.7	73	0	3	-	-	-	-	-	
South Central Bay																											
Fremont	11	0	3	0.0	7	0	6.1	3.7	2.2	0	6	1.9	0	-	-	-	20.0	22.5	52	0	1	48	0	41.6	12.5	11.4	
Hayward	9	0	0	0.0	7	0	6.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Redwood City	9	0	0	0.0	6	0	5.3	5.8	2.8	0	7	1.7	0	-	-	-	19.5	22.0	53	0	1	43	0	41.8	11.5	11.3	
San Leandro	10	0	1	0.0	6	0	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Santa Clara Valley																											
Gilroy*	12	0	6	*	9	2	5.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Los Gatos*	11	0	4	0.0	9	2	6.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
San Jose Central*	*	*	*	*	*	*	*	5.3	4.5	0	8	*	0	-	-	-	*	*	70	0	2	58	0	*	*	*	
San Jose East	9	0	0	0.0	7	0	5.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
San Jose, Tully Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21.9	25.4	70	0	2	54	0	45.9	12.0	11.8	
San Martin	12	0	8	0.0	10	5	8.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sunnyvale*	9	0	0	*	7	0	*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Bay Area Days over Standard	2 16				7			0			0			0			0 6					5					
*See notes of explanation on back of this page																											

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NOTES

The annual Bay Area Air Pollution Summary summarizes measurements for the federal and California time-averaged pollutant standards.

This is the first year the Air Pollution Summary is reporting PM_{2.5} statistics.

*Station Information (see asterisks on front page)

The **Fairfield** monitoring station was relocated on May 29, 2002.

The **Gilroy** station was closed for the year 2000, due to construction activity. All 3-year average statistics for Gilroy have been omitted from this summary.

The **Los Gatos** station was closed from October 10 to December 3, 2002, due to construction on site.

The **San Jose 4th Street** station was closed for relocation on April 30, 2002. It reopened as **San Jose Central** on October 5, 2002. Ozone statistics and annual nitrogen dioxide, PM₁₀, and PM_{2.5} statistics for San Jose Central have been omitted from this summary.

The **San Pablo** station was closed for relocation on August 24, 2002, and reopened on September 13, 2002. Annual statistics for San Pablo have been omitted from this summary.

The **Sunnyvale** station opened in 2001. All 3-year average statistics for Sunnyvale have been omitted

Explanation of Terms

State and federal excesses occur when pollutant concentrations surpass the indicated standards, with values in most cases rounded to the same number of decimal places.

MAX HR / MAX 8-HR / MAX 24-HR

The highest average contaminant concentration over a one-hour period, an eight-hour period (on any given day), or a 24-hour period (from midnight to midnight).

NAT DAYS

The number of days during the year for which the monitoring station recorded contaminant concentrations in excess of the national standard.

CAL DAYS

The number of days during the year for which the station recorded contaminant levels in excess of the California standard.

3-YR AVG (1-hr ozone standard)

The average number of days per year during which ozone levels were in excess of the national 1-hour standard, based on the most recent three-year period. *An average higher than 1.0 at any monitoring station means the region will be considered out of attainment by the EPA.*

3-YR AVG (8-hr ozone standard)

The 3-year average of the fourth highest 8-hour average ozone concentration for each monitoring station. *A 3-year average greater than 8.4 at any monitoring station means that the region will be considered out of attainment by the EPA.*

3-YR AVG (PM_{2.5} 24-hour standard)

The 3-year average of the annual 98th percentiles of the individual 24-hour concentrations of PM_{2.5}. *A 3-year average greater than 65 µg/m³ at any monitoring station means that the region will be considered out of attainment by the EPA.*

3-YR AVG (PM_{2.5} annual standard)

The 3-year average of the quarterly averages of PM_{2.5}. *A 3-year average greater than 15 µg/m³ at any monitoring station means that the region will be considered out of attainment by the EPA.*

ANN AVG

The yearly average (arithmetic mean) of the readings taken at a given monitoring station.

ANN GEO MEAN

The annual geometric mean concentration level (used for PM₁₀). The geometric mean of *n* positive numbers is the *n*th root of their product.

PM₁₀

Particulate matter ten microns or smaller in size. (PM₁₀ is only sampled every sixth day. *Actual* days over standard can be estimated to be six times the number shown.)

PM_{2.5}

Particulate matter 2.5 microns or smaller in size. PM_{2.5} is a sub-category of PM₁₀.

TOTAL BAY AREA DAYS OVER STANDARD is not a sum of excesses at individual stations, but rather of the number of days for which excesses occurred at any one or more stations.

HEALTH-BASED AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Std	National Std
Ozone	1 Hour	9 pphm	12 pphm
	8 Hour	—	8 pphm
Carbon Monoxide	1 Hour	20 ppm	35 ppm
	8 Hour	9.0 ppm	9 ppm
Nitrogen Dioxide	1 Hour	25 pphm	—
	Annual	—	5.3 pphm
Sulfur Dioxide	24 Hour	40 ppb	140 ppb
	Annual	—	30 ppb
Particulates < 10 microns	24 Hour	50 µg/m ³	150 µg/m ³
	Annual	—	50 µg/m ³
	Annual Geometric Mean	30 µg/m ³	—
Particulates < 2.5 microns	24 Hour	—	65 µg/m ³
	Annual	—	15 µg/m ³

Concentrations

ppm
parts per million

pphm
parts per hundred million

ppb
parts per billion

µg/m³
micrograms per cubic meter

TEN-YEAR BAY AREA AIR QUALITY SUMMARY

YEAR	OZONE		CARBON MONOXIDE				Nitrogen Dioxide	Sulfur Dioxide	PM ₁₀		PM _{2.5}			
	1-Hr		8-Hr		1-Hr		8-Hr		1-Hr	24-Hr		24-Hr*	24-Hr**	
	Nat	Cal	Nat		Nat	Cal	Nat	Cal	Cal	Nat	Cal	Nat	Cal	
1993	3	19	-		0	0	0	0	0	0	0	0	10	-
1994	2	13	-		0	0	0	0	0	0	0	0	9	-
1995	11	28	-		0	0	0	0	0	0	0	0	7	-
1996	8	34	-		0	0	0	0	0	0	0	0	3	-
1997	0	8	-		0	0	0	0	0	0	0	0	4	-
1998	8	29	16		0	0	0	0	0	0	0	0	5	-
1999	3	20	9		0	0	0	0	0	0	0	0	12	-
2000	3	12	4		0	0	0	0	0	0	0	0	7	1
2001	1	15	7		0	0	0	0	0	0	0	0	10	5
2002	2	16	7		0	0	0	0	0	0	0	0	6	5
*PM ₁₀ is sampled every sixth day—actual days over standard can be estimated to be six times the numbers listed.													**2000 is the first full year for which the Air District measured PM _{2.5} levels.	

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